

## Monthly Report to the Provost – Faculty of Science

The Faculty of Science (FoS) has the following to report for the month of **October 2021**:

### Engaging Learners

The FoS outreach program, Science Rocks! hosted their first Science Rocks! Days event on Saturday, October 16 <https://ufv.ca/science/science-in-the-community/science-rocks/science-rocks-days/>. 24 kids aged 9-11 attended the “Ocean-ology” camp. A huge thank you to our Science Rocks Coordinator and Math and Stats Professor, **Robin Endelman**, UFV science students, **Rhien Hare**, team Lead, and her crew of **Manjot Benning**, **Connor Frey**, **Kasey McDougall**, and **Curtis Plug** for making it a camp to remember! Our next camp, also sold out, “Nature Exploration!”, is being held at CEP on October 30. Read more on our blog: <https://blogs.ufv.ca/science/2021/10/20/science-rocks-welcomes-back-campers/>

**Dr. Stefania Pizzirani**, Assistant Professor from School of Land Use and Environmental Change (SLUEC) was invited to co-present at the Canadian Institute of Forestry Conference and AGM on October 7. <http://www.cif-ifc.org/2021-conference-agm/> Her presentation, *Articulating Indigenous Rights Within the Inclusive Development Framework*, was included in the Session: A Path to Reconciliation: Learning from Indigenous Stewardship.

Nominations were held last month for Student Representatives on Science Faculty Council. On October 8, 4-year BSc Student, **Heather Kelly** and 3-year BSc Student, **Manveer Jhamat**, both Biology majors attended their first meeting.

The Women in Science Engineering and Technology (UFV WEST) hosted a welcome back social. The event featured female STEM professors and UFV Science clubs and associations. Students were able to connect with other science students and gather some helpful information including amazing opportunities in STEM here at UFV. Read more on our blog: <https://blogs.ufv.ca/science/2021/10/13/ufv-wests-welcome-back-social-a-huge-success/>

**Dr. Sharon Gillies** from Biology was featured in UFV’s student newspaper The Cascade Vol 29, issue 22 by Biology student **Chandy Dancey** profiling Dr. Gillies work with invasive plants and monitoring water quality. See <https://blogs.ufv.ca/science/2021/10/28/interview-with-dr-sharon-gillies-biology-professor-the-cascade/>

### Transforming Lives

**Dr. Olav Lian** and **Carolyn Atkins** from SLUEC recently returned with their Geography 202 class from a two-day field trip exploring glacial lake sediments, slow moving earthflows, rock formations and other landforms along the Fraser River. Read more on our blog: <https://blogs.ufv.ca/science/2021/10/21/exploring-the-landforms-with-sluec-faculty-olav-lian-and-carolyn-atkins/>

Associate Professor, **Dr. Cherie Enns** from SLUEC participated in the 2021 Urban Economy Forum hosted by the UN-Habitat for a Better Urban Future in Brampton, Ontario on October 4. She joined other

national and international presenters on a panel regarding Harnessing Urban Youth to Transform our Urban Communities. <https://www.ueforum.org/uef-2021>

Chemistry Professor **Dr. Noham Weinberg** and Chemistry LTA Instructor, **Dr. Jake Spooner** submitted a grant application, as co-investigators, to the Petroleum Research Fund of the American Chemical Society for \$70,000 over 3 years. Most of the funds will be dedicated to undergrad student salaries. The project title is: Thermodynamic Stability of Petroleum Hydrocarbons at Geochemical Conditions. Dr. Spooner also submitted an abstract for an oral presentation at the American Physical Society March Meeting 2022 in Chicago, Illinois. The presentation: A Newtonian Algorithm for Constant Pressure Molecular Dynamics with Periodic Boundary Conditions has also been submitted to the Journal of Molecular Physics (see bibliography information below).

### **Building Community**

Biology Assistant Professor and EFCIE Faculty Associate, **Dr. Sandra Gillespie**, held a webinar for the Esposito Family Centre for Innovation and Entrepreneurship Conservation as Innovation: The Role of Biodiversity in Agriculture on October 20. She discussed the ways in which biodiversity and restoration efforts on farms can benefit farmers while simultaneously contributing to biodiversity conservation. Her presentation will be available on the EFCIE video gallery here: <https://ufv.ca/innovation-entrepreneurship/upcoming-efcie-events/video-gallery/>

The Indigenous peer mentors and coordinators joined Biology Associate Professor, **Dr. Alan Reid**, for a guided walking tour around the Abbotsford campus on October 15. He introduced them to plants on campus that are culturally significant and toured the new Indigenous Garden. The journey lasted about 3 hours as the peers were very engaged. Alan also joined a group for fall planting of spring-flowering bulbs at the CEP Shakespeare Reconciliation Garden and provided an orientation to the garden and plants.

Associate Professor, **Dr. Cherie Enns** from SLUEC with other partner organizations from around the globe received confirmation from the Social Science and Humanities Research Council that the Migration and Food Insecurity in the Global South: Interactions, Impacts, and Remedies (MiFOOD) Project is now official. The goal of the MiFOOD Project is to design and implement a new and innovative high-impact global research and knowledge mobilization agenda focused on the neglected interactions between migration and food security within the Global South. The public launch is scheduled for December 13, 2021, and to be hosted by the Balsillie School of International Affairs, University of Waterloo. More information on the \$2.5 million awarded to the project: <https://bit.ly/3nflsAL>

SLUEC Instructor, **Dr. Talha Qadri's**, submitted abstract "NS45A-0463 - An Integrated Approach for Site Characterization to Understand the Seismic Vulnerability of the Attock City, Pakistan" was accepted by the American Geophysical Union (AGU) Fall Meeting in December 2021. In addition, he will be working as a Guest Editor for a special issue of MDPI-Energies (Impact Factor 3.004) on "New Insights into Reservoir 3D Modeling and Simulation" to be submitted in May 2022.

[https://www.mdpi.com/journal/energies/special\\_issues/reservoir\\_3d\\_modeling#editors](https://www.mdpi.com/journal/energies/special_issues/reservoir_3d_modeling#editors)

The Faculty of Science sponsored the 3-part chillTV-produced mini-series "Climate Crisis!" with UFV Professor Emeritus, **Dr. Tim Cooper**. Having delivered close to 200 lectures on the subject during his

tenure. He shared important information ... some certainly worrisome, with levity and hope for our future, all from the perspective of a resident of the Fraser Valley. The full Climate Crisis! series can be viewed on chillTV's Facebook Playlist:

<https://www.facebook.com/watch/733851043405590/605084610730031>

**Sample List of Presentations/Publications (UFV student names underlined> by FoS personnel:**

**Lee LEJ**, Bols NC (2021) Use of fish cells lines as model systems. Gill Health Initiative meeting, Stirling, Scotland, Oct 26-27 (virtual).

Pritchard D, Goldbach R, **Lee JB**, Bols NC, **Lee LEJ** (2021) Development and use of epithelial cell lines from the olfactory mucosa, gill and gut to study the actions of nitrite in rainbow trout. Canadian Ecotoxicity Workshop (Halifax, NS)

Sentell, Z., **Spooner, J.**, **Weinberg, N.** *Calculation of Molecular Volumes of Amino Acids*. Under Revision. *Canadian Journal of Chemistry*

**Spooner, J.**, Eslamibidgoli, M.J., Malek, K., Eikerling, M. *Molecular dynamics study of the proton density distribution at ionomer-substrate interfaces in PEFC cathode catalyst layers*. Submitted for publication.

Solhaug A, Gjessing M, Dahle M, Kristensen T, Ivanova L, Sindre H, Olsvik P, Nowak B, Slattery O, **Lee LEJ** (2021) Development of an in vitro model to study environmental factors influencing the gill epithelial function (GILLMODEL). Gill Health Initiative meeting, Stirling, Scotland, Oct 26-27 (virtual).

**Weinberg, N.**, Edwards, E., Huber, L., Sentell, Z., **Spooner, J.**, *A Newtonian Algorithm for Constant Pressure Molecular Dynamics with Periodic Boundary Conditions*. Under revision. *Molecular Physics*